Functions Notation (Homework)   NAME: _____
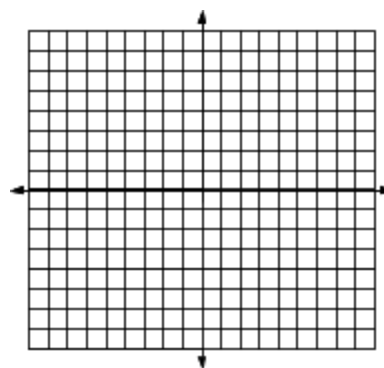**Evaluating, Input/Output**

1. Evaluate the following expressions given the functions below:

$$g(x) = -3x + 1 \qquad f(x) = x^2 + 7 \qquad h(x) = \frac{12}{x} \qquad j(x) = 2x + 9$$

   a. $g(10) =$ **b.** $f(-3) =$ **c.** $h(-2) =$

   d. $j(7) =$ **e.** $h(-8)$ **f.** $g(b+1)$

   h. Find x if $g(x) = 16$ **i.** Find x if $h(x) = -2$ **j.** Find x if $f(x) = 23$

   k. g(x)·j(x)

2. Given $f(x) = 3 - 4x$. Fill in the table and then sketch a graph.
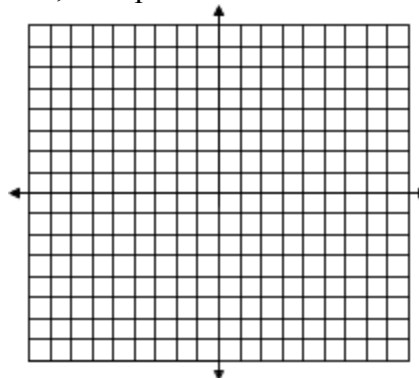   ****Hint**: Use TABLE on your calculator!

x	$f(x)$
-6	
-3	
0	
1	
	-5

3. Given f(x) = 5x + 2. Fill in the table and then sketch a graph.

x	$f(x)$
3	
0	
-10	
2	
	6
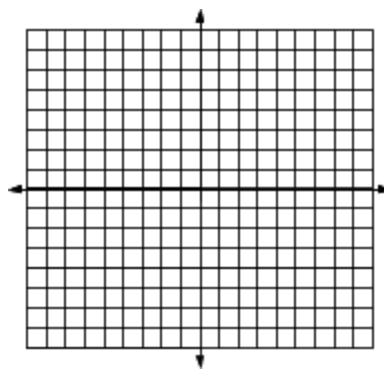
4. Translate the following statements into coordinate points, then plot them!

    a. $f(-1) = 1$ →   (,   )

    b. $f(2) = 7$ →   (,   )

    c. $f(1) = -1$ →   (,   )

    d. $f(3) = 0$ →   (,   )

5. Given this graph of the function f(x):
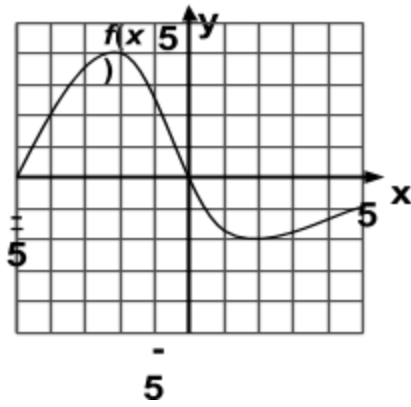
Find the following. (a) is done for you!

a. $f(-4) = 2$ **b.** $f(0) =$ **c.** $f(3) =$ **d.** $f(-5) =$
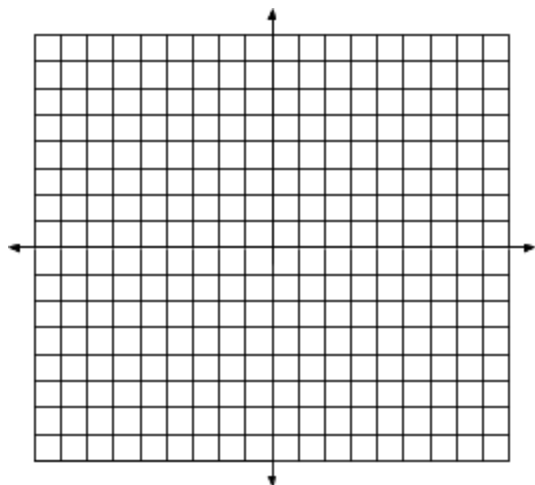
e. x when $f(x) = 4$ **f.** x when $f(x) = 0$

APPLICATION

7. Swine flu is attacking Porkopolis. The function below determines how many people have swine where t = time in days and S = the number of people in thousands. Make a table!

$$S(t) = 9t - 4$$

t	S(t)
0	
1	
2	
3	
5	
10	
	122

a. Find $S(4)$.

b. What does $S(4)$ mean?

c. Find t when $S(t) = 23$.

d. What does $S(t) = 23$ mean?

e. Graph the function.